AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A lithium secondary battery comprising:

a positive electrode formed by coating a lithium metal oxide on a positive current collector;

a negative electrode formed by coating carbonaceous materials or SnO_2 on a negative current collector, where the negative current collector is made of a Cu-based alloy with a thickness of 20 μm or less and the Cu-based alloy comprises at least one material selected from the group consisting of boron and cobalt, and also comprises at least one material selected from the group consisting of nickel, titanium, magnesium, tin, zinc, ~~boron,~~ chromium, manganese, ~~cobalt,~~ iron, vanadium, aluminum, zirconium, niobium, bismuth, lead, silver, and misch metal and further comprises a copper-based material selected from the group consisting of copper, copper/nickel, copper/titanium, and copper/nickel/titanium, wherein the Cu-based alloy is produced by a plating process into a foil shape;

a separator interposed between the positive and negative electrodes; and

an electrolyte into which the positive and negative electrodes and the separator are immersed.

2. (Previously Presented) The lithium secondary battery of claim 1 wherein an amount of nickel is 0.8 to 4 wt% of copper, an amount of titanium is 0.2 to 4 wt% of copper, an amount of magnesium is 0.05 to 0.6 wt% of copper, an amount of tin is 0.1 to 2.0 wt% of copper, an amount of boron is 0.0005 to 5.0 wt% of copper, an amount of chromium is 0.0005 to 0.5 wt% of copper, an amount of manganese is 0.1 to 1.0 wt% of copper, an amount of cobalt is 0.01 to 2.0 wt% of copper, an amount of vanadium is 0.0005 to 0.5 wt% of copper, an amount of zirconium is 0.0005 to 0.5 wt% of copper, an amount of niobium is 0.0005 to 0.5 wt% of copper, an amount of bismuth is 0.0005 to 0.5 wt% of copper, an amount of lead is 0.0005 to 0.5 wt% of copper, and an amount of silver is 0.0005 to 0.5 wt% of copper.

3. (Currently Amended) A method for making a lithium secondary battery comprising:

forming a positive electrode by coating a lithium metal oxide on a positive current collector;

forming a negative electrode by coating carbonaceous materials or SnO_2 on a negative current collector, where the negative current collector is made of a Cu-based alloy with a thickness of 20 μm or less and the Cu-based alloy comprises at least one material selected from the group consisting of boron and cobalt, and also comprises at least one material selected from the group consisting of nickel, titanium, magnesium, tin, zinc, ~~boron,~~ chromium, manganese~~, cobalt,~~ iron,

vanadium, aluminum, zirconium, niobium, bismuth, lead, silver, and misch metal and further comprises a copper-based material selected from the group consisting of copper, copper/nickel, copper/titanium, and copper/nickel/titanium, wherein the Cu-based alloy is produced by a plating process into a foil shape;

interposing a separator between the positive and negative electrodes; and

injecting an electrolyte to immerse the positive and negative electrodes and the separator.

4. (Currently Amended) A lithium secondary battery comprising:

a positive electrode formed by coating a lithium metal oxide on a positive current collector;

a negative electrode formed by coating at least one of carbonaceous materials and SnO_2 on a negative current collector, where the negative current collector is made of a copper-based alloy with a thickness of 20 μm or less and the copper-based alloy comprises at least one material selected from the group consisting of boron and cobalt, and also comprises at least two materials selected from the group consisting of nickel, titanium, magnesium, tin, zinc, ~~boron,~~ chromium, manganese, silicon, ~~cobalt,~~ iron, vanadium, aluminum, zirconium, niobium, phosphorous, bismuth, lead, silver, and misch metal, wherein the copper-based alloy is produced by a plating process into a foil shape;

a separator interposed between the positive and negative electrodes; and

an electrolyte into which the positive and negative electrodes and the separator are immersed.

5. (Previously Presented) The lithium secondary battery of claim 4, wherein the at least two materials comprise at least three materials.

6. (Previously Presented) The lithium secondary battery of claim 4, wherein the at least two materials comprise at least four materials.

7. (Previously Presented) The lithium secondary battery of claim 4, wherein the at least two materials comprise nickel and titanium.

8. (Previously Presented) The lithium secondary battery of claim 5, where the at least three materials comprise nickel, titanium, and magnesium.

9. (Previously Presented) The lithium secondary battery of claim 6, wherein the at least four materials comprise nickel, titanium, magnesium, and manganese.

10. (Previously Presented) The lithium secondary battery of claim 6, wherein the at least four materials comprise nickel, titanium, magnesium, and zinc.

11. (Previously Presented) The lithium secondary battery of claim 7, wherein the amount of nickel is 0.8 to 4 wt% of the copper, and the amount of titanium is 0.2 to 4 wt% of the copper.

12. (Previously Presented) The lithium secondary battery of claim 8, wherein the amount of nickel is 0.8 to 4 wt% of the copper, the amount of titanium is 0.2 to 4 wt% of the copper, and the amount of magnesium is 0.05 to 0.6 wt% of the copper.

13. (Previously Presented) The lithium secondary battery of claim 9, wherein the amount of nickel is 0.8 to 4 wt% of the copper, the amount of titanium is 0.2 to 4 wt% of the copper, the amount of magnesium is 0.05 to 0.6 wt% of the copper, and the amount of manganese is 0.1 to 1.0 wt% of the copper.

14. (Previously Presented) The lithium secondary battery of claim 10, wherein the amount of nickel is 0.8 to 4 wt% of the copper, the amount of titanium is 0.2 to 4 wt% of the copper, the amount of magnesium is 0.05 to 0.6 wt% of the copper, and the amount of zinc is 0.0005 to 0.5 wt% of the copper.

15. (Previously Presented) The lithium secondary battery of claim 4, wherein the Cu-based alloy consists essentially of copper, nickel, and titanium.

16. (Previously Presented) The lithium secondary battery of claim 4, wherein the Cu-based alloy consists essentially of copper, nickel, titanium, and magnesium.

17. (Previously Presented) The lithium secondary battery of claim 4, wherein the Cu-based alloy consists essentially of copper, nickel, titanium, magnesium, and manganese.

18. (Previously Presented) The lithium secondary battery of claim 4, wherein the Cu-based alloy consists essentially of copper, nickel, titanium, magnesium, and zinc.

19. (Currently Amended) A method for making a lithium secondary battery comprising:

forming a positive electrode by coating a lithium metal oxide on a positive current collector;

forming a negative electrode by coating at least one of carbonaceous materials and SnO_2 on a negative current collector, where the negative current collector is made of a Cu-based alloy with a

thickness of 20 μm or less, and the Cu-based alloy including at least one material selected from the group consisting of boron and cobalt, and also including at least two materials selected from the group consisting of nickel, titanium, magnesium, tin, zinc, ~~boron,~~ chromium, manganese, silicon, ~~cobalt,~~ iron, vanadium, aluminum, zirconium, niobium, phosphorous, bismuth, lead, silver, and misch metal, wherein the copper-based alloy is produced by a plating process into a foil shape;

interposing a separator between the positive and negative electrodes; and

injecting an electrolyte to immerse the positive and negative electrodes and the separator.

20. (Previously Presented) The method of claim 19, wherein the at least two materials comprise at least three materials.

21. (Previously Presented) The method of claim 19, wherein the at least two materials comprise at least four materials.

22. (Previously Presented) The method of claim 19, wherein the at least two materials comprise nickel and titanium.

23. (Previously Presented) The method of claim 20, wherein the at least three materials comprise nickel, titanium, and magnesium.

24. (Previously Presented) The method of claim 21, wherein the at least four materials comprise nickel, titanium, magnesium, and manganese.

25. (Previously Presented) The method of claim 21, wherein the at least four materials comprise nickel, titanium, magnesium, and zinc.

26. (Currently Amended) A lithium secondary battery comprising:

a positive electrode formed by coating a lithium metal oxide on a positive current collector;

a negative electrode formed by coating at least one of carbonaceous materials and SnO_2 on a negative current collector, where the negative current collector is made of a copper-based alloy foil with a thickness of 20 μm or less, and the copper-based alloy foil includes at least one material selected from the group consisting of boron and cobalt, and also includes at least two materials selected from the group consisting of nickel, titanium, magnesium, manganese, and zinc;

a separator interposed between the positive and negative electrodes; and

an electrolyte into which the positive and negative electrodes and the separator are immersed.

27. (Previously Presented) The lithium secondary battery of claim 26, wherein the at least two materials comprise at least three materials.

28. (Previously Presented) The lithium secondary battery of claim 26, wherein the at least two materials comprise at least four materials.

29. (Previously Presented) The lithium secondary battery of claim 4, wherein the copper-based alloy foil is produced by an electro-plating process.

30. (Previously Presented) The method of claim 19, wherein the copper-based alloy foil is produced by an electro-plating process.

31. (Previously Presented) The lithium secondary battery of claim 26, wherein the copper-based alloy foil is produced by an electro-plating process.

32. (New) A lithium secondary battery comprising:

a positive electrode formed by coating lithium metal oxides on a positive current controller;

a negative electrode formed by coating carbonaceous materials or SnO_2 on a negative current collector; the negative current collector being formed of a copper-based alloy foil with a thickness of 20 μm or less and the copper-based alloy including at least one material selected from the group consisting of magnesium, boron, cobalt, vanadium, niobium, bismuth, silver, and misch metal and further comprises a copper-based material selected from the group consisting of copper, copper/nickel, copper/titanium, and copper/nickel/titanium, wherein the copper-based alloy is produced by a plating process into a foil shape;

a separator interposed between the positive and negative electrodes; and

an electrolyte into which the positive and negative electrodes and the separator are immersed.